urine after ingestion of the oil. They proved inert, failing altogether to produce any amelioration in the disease.

The cubebin, and the soft resin left after the removal of the cubebin, were next administered to patients with gonorrhœa. Each of these substances was found to be entirely deficient of curative power.

On the other hand, the cubebic acid turned out to have a decided therapeutical value in recent cases of gonorrhœa. The crystallized acid was made into pills, each containing a grain and a half. The patients began by taking from five to twenty of these pills daily, the number being increased every day. Of five patients to whom cubebic acid was administered, three were cured completely within six days; and in the remaining two the discharge was very much lessened, so that a few injections sufficed to remove it. In a case of chronic gonorrhœa, however, the administration of the cubebic acid failed entirely. Moreover, cubebic acid was in one case employed in combination with magnesia, and in another as cubebate of soda. These preparations did not give very satisfactory results. Mixtures of cubebic acid and of the volatile oil were given to other patients, and produced a diminution of the disease; this is ascribed by Bernatzik entirely to the cubebic acid. From these experiments Bernatzik concludes that the following preparations of cubebs would be preferable to all others:—1. "*Cubebæ oleo æthereo privatæ in pulvere subtili.*"—Simple distillation, although it does not completely remove the volatile oil, at least takes it away to a sufficient extent to enable the residue to be administered in adequate doses without inconvenience. He proposes to give from two to four drachms of this preparation in the form of an electuary, several times a day. The quantity taken during the twenty-four hours ought to be from 750 to 1000 grains, for the cubebic acid would only form about four per cent. of it. 2. "*Extractum Cubebarum resinosum.*"—This would be obtained by digesting the preparation last named, for a considerable time, with ninety per cent. alcohol. Cubebic acid would constitute more than a fourth part of the extract thus obtained, so that the daily dose would be about 120–160 grains. 3. "*Acidum resinosum Cubebarum.*"—The cubebic acid itself. The best way to administer it is in the form of pills, made up with soap and pulv. altheæ, the resin being first melted in a hot mortar, and some alcohol being added to it while in the liquid state.—*Biennial Retrospect Syd. Soc.*, 1867.

MEDICAL PATHOLOGY, SPECIAL THERAPEUTICS, AND PRACTICAL MEDICINE.

11. *Pathology of Functional Nervous Disorders.*—Dr. C. HANDFIELD JONES, in a recent contribution (*Lancet*, July 6, 1867) to this subject, concludes with the following observations, which are well worthy of attention:—

"1. The study and appreciation of the different kinds and qualities of morbid nervous action seem to be of fully as much importance as any necroscopic examination. The latter must always present to us chiefly the *ultimate* results of morbid processes, which have been going on often for a very long period, and can reveal to us very little of the actual nature of the processes themselves.

"2. Amid the manifold varieties of morbid nervous action, there seem to be two principal types, which we meet with both in the peripheral and central districts. One of these, hyperæsthesia, displays itself in many familiar examples, as the so-called hysterical breast, the irritable testis, the photophobic eye, the exquisitely sensitive uterus or stomach, and so on. These are instances in which the morbid nervous action is either situated in the peripheral nerves, or at any rate does not extend higher than the associated tertiary centres. Mania, delirium ferox, many cases of hypochondriasis, of hysteria, and epilepsy, afford instances in which a quite similar disorder seems to affect the primary or secondary centres. The other type is anæsthesia, which may show itself peripherally, as analgesia, loss of tactile faculty, or of appreciation of temperature or of electricity. Its peripheral character is very apparent, when, as is not uncommon, it affects tracts of definite extent not corresponding to the distribution of a single or several nerves, and does not affect the subjacent muscles. Centrally anæsthesia may be traced in states of melancholia, of low muttering delirium, of hydrencephaloid coma, and probably in many cases of pernicious ague with coma.

"Lastly, I would say that hyperæsthesia and anæsthesia appear to be essentially due to primary changes in the nervous tissue, the result of various poisons, miasms, or imponderable influences. Not that I would affirm the hyperæsthetic or anæsthetic conditions of the nervous tissue to be always independent of hyperæmia or anæmia; but I would express as strongly as possible my conviction that the amount of blood-supply remaining constant, the quality of nervous action may vary extremely, and *vice versâ*.

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12. *On Spectral Illusions of the Senses.*—The *Edinburgh Medical Journal* for July last contains a highly interesting paper on this subject by Dr. Robert Paterson, in which he endeavours to investigate the causes of these illusions, to explain how they occur and how they are produced, and to show the pathological conditions most liable to give rise to them, and to describe the tests to be applied to distinguish illusions from realities.

In illustration of the subject he directs attention:—

"I. To illusions of the senses, and the manner of testing them.

"II. To illusions of the senses, as they are to be distinguished from the delusions of the insane, on the one hand, and vivid dreams on the other.

"III. To illusions of the senses having their origin—1st, in the brain; 2d, in the structures of the eye; and 3d, in external impressions made during certain states of mental excitement.

"IV. To the pathology of illusions."

A number of remarkable cases of illusions of the senses are related. The following are the more important of his conclusions:—

"1st. That illusions of the senses have their origin in certain derangements of the brain connected with sensation and perception.

"2d. That the pathology of illusions consists of two different states of the membranes and brain itself—that of congestion, and that of diminished supply of blood. The latter being by far the most common, as in those from advanced age.

"3d. That illusions of the senses are also liable to arise from morbid substances in the blood itself, or the absorption into it of foreign ingredients.

"4th. That in persons of sane mind and common intelligence, illusions of the senses can be, and are generally detected as such, by the reason, and by various tests which the reason supplies—differing thus from the delusions of insanity, which are believed by the individual to be real.

"5th. That images of sudden and vivid mental origin, or objects about which the mind has become over-excited, are liable to present themselves to the different organs of sense in the form of illusions.

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13. *Relations of Chorea to Insanity.*—M. Thore has published (*Ann. Med. Psych.*) an important paper on this subject. He relates two cases in which distinct symptoms of insanity supervened on a chronic attack. The first of these is of great interest, because the chorea itself occurred as a complication of acute articular rheumatism. The patient was a young lady, who experienced an attack of general acute rheumatism, with pleurisy and endocarditis. Coincidentally with the subsidence of the pains she began (twenty-four days from the commencement of the illness) to be affected with choreic movements, chiefly of the left arm and of the face. Two days later, alarming hallucinations of sight, hearing, and feeling occurred; for two or three days these were very distressing. The mental symptoms and the chorea diminished simultaneously, but the patient remained abstracted and timid for some days. The chorea disappeared about nineteen days after its first occurrence, and only a little weakness remained; a week later the patient was quite well. The other case of Thore was that of a needlewoman, who, ever since an attack of typhus, which she experienced when

eleven years old, had been melancholy and depressed. Menstruation had come on at the age of sixteen in a regular manner, although she was chlorotic; but a year afterwards she caught cold at her period, and the menstrual flow was suppressed. Three weeks later choreic movements attacked the lower extremities, and subsequently the upper; they were especially strong on the left side. The chorea and the general agitation increased during the next six weeks, when, at the height of the disorder, visual and auditory hallucinations of a gloomy kind appeared, especially in the evening. There was difficulty of speech, incoherence of ideas, and melancholy, with a tendency to suicide and constant thoughts about it. In the course of another six weeks the chorea, the agitation, the thoughts of suicide, and also the hallucinations, began to leave the patient. Simultaneously with the restoration of the menses the cure was complete.

It has long been established, by the facts recorded by Marcé, Trousseau, Brierre de Boismont, Warin, Bricheteau, and also by the histories of the chorea epidemics of the middle ages, that various kinds of intellectual and emotional insanity may occur in cases of chorea. The mental disturbances may vary from slight affections of the emotions or the will to hallucination, mania, melancholia, and even imbecility. The two cases recorded by Thore are each interesting as connecting the chorea and the mental affections with an acute disease. In the first case acute rheumatism, which is known to have so frequent a connection with chorea, was actually present at the time of the outbreak of choreic symptoms. Wherever the rheumatic complication is present it is important to distinguish, in any mental aberrations which may occur in this, between mere delirium, with coma or convulsions, symptoms which acute rheumatism alone may easily produce, and distinct hallucinations or other signs of important mental disturbance which are here in question. The second case is interesting on account of the pre-existing state of mental depression which appears to have been left by an attack of *typhus* which happened so long as six years previously, and also because the mental disturbance took the form of *melancholia*, a comparatively rare complication of chorea. The chlorotic condition of the patient, too, is noteworthy.

The general opinion of Thore on the subject of the relationship of chorea to its occasional mental complications is that the latter can hardly depend to any great extent upon it. He thinks that simple chorea is rarely so complicated, and that mental affections are for the most part caused by coincident diseases, *e. g.*, rheumatism, typhus, or chlorosis.—*Biennial Retrospect*, 1867.

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14. *Morbid Anatomy of Tubercle.*—MM. **Hérard** and **Cornil**, in their published work on pulmonary phthisis, have entered upon the study of the morbid anatomy of tubercular matter. They have established microscopically, and in a manner which they believe to be incontestable, that the yellow caseous masses, which were considered by Laënnec and those of his school, to be tubercular, are only lobular pneumonias in which the exudation products have undergone a granular fatty degeneration; and that there is no other tubercle than the miliary semitransparent or opaque granular matter, a primordial lesion, specific and truly characteristic of the diathesis.—*Brit. & For. Med.-Chir. Rev.*, July, 1867, from *Journ. de Méd. et de Chirurg. prat.*, March, 1867.

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15. *Fatty Embolism.*—In Schmidt's *Annals* for October, 1866, is published a tolerably complete paper by **Meissner**, on thrombosis and embolism. Experiments related by Dr. Bergmann show that the fat contained in the circulatory system follows the sanguinary current, or passes through the walls of the vessels and becomes diffused through the cellular tissue. Professor Wagner thinks that, in addition to pyohæmia, a cause of fatty embolism is to be found in great shocks, causing the rupture of the marrow in the bones, and of the fat-cells. Henry Müller recognizes a third cause in the fatty degeneration of the arteries present in Bright's disease. A man, aged 39, given to drink, died of pneumonia accompanied by violent delirium. At the autopsy, a double pneumonia accompanied by gangrenous bronchitis was discovered, with the renal changes of Bright's disease, fatty degeneration of the ciliary arteries, the vessels of the pons Varolii, and the cerebellum. The capillaries were completely obliterated by

concretions formed of fat and epithelial *débris*. Busch, of Kœnigsberg, reports a case in which fatty embolism occurred throughout the capillaries, and coma and death followed thirty-six hours after a severe compound fracture of the leg from kicks by a horse. The embolisms brought on death, not by purulent infection and metastatic abscesses, but by the obliteration of an important part of the capillary system. To demonstrate these facts, Busch made a series of experiments on dogs, whose bones he fractured. He found the capillaries of the lung, even the largest vessels, full of fatty matter, without a trace of metastatic abscess in the lungs, and the remainder of the blood did not appear to contain fatty matter. In order to decide whether this reabsorption is effected by the capillaries or by the other vessels, Busch filled up the medullary cavity of the bone, extracting the marrow, with olive oil coloured with cinnabar; and he ascertained that the reabsorption is accomplished by sanguineous and lymphatic vessels of a certain size only. It was impossible to believe in a physiological reabsortion of the fat; for the fatty embolisms occurred in direct ratio to the intensity of the disturbance. Amongst forty-three cases of fatty embolisms observed by Busch, there were twenty-three fractures, three cases of periostitis or acute osteomyelitis, four of metritis, four abscesses of the fatty regions, one caries with congestive access, two tumours of the leg, one white swelling, two fatty degenerations of the arteries in Bright's disease. There were only four cases in which it might be positively affirmed that the embolism had its source in a purulent origin. In this case, the reabsorption was entirely accomplished by the lymphatics. The fat is not reabsorbed in a state of emulsion, but penetrates direct by the opening of the injured vessels; this is amply demonstrated by the experiments of Weber and Busch.—*Brit. Med. Journ.*, August 24, 1867.

16. *Organic Change of Structure of the Hair produced by Syphilis.*—Mr. ERASMUS WILSON, in a paper read before the Royal Medical and Chirurgical Society (June 11, 1867), stated that the diseases of the hair at present known to us are chiefly such as result from an excess or deficiency of nutrition. Only one instance has been heretofore distinguished as being due to alteration of structure—namely, tinea or phytosis; but to this the author proposes to add another, in which the cause of disturbance is syphilis, or rather the syphilitic cachexia. In a case of constitutional syphilis, accompanied with trichorrhœa of the hair of the head and alopecia, the hairs of the beard presented some remarkable phenomena. The shaft was blackened and nodulated from point to point, and at these spots broke through with the most moderate force. Under the microscope the diseased parts were found to be some constricted and some enlarged into a kind of fusiform bulb; they consisted of a dark cylinder inclosed in a transparent cortical envelope, the dark cylinder being composed of nucleated cells, pigmentary matter, air cavities, and crystalline fragments, and being continuous above and below with the medulla, of which it seemed to be an enlarged expansion; while the transparent envelope was a thin layer, which represented the fibrous portion and the cuticle of the hair. The dark cylinder was, in fact, an arrest of development of the hair at its cellular stage, and constituted the chief bulk of the diseased portion of the shaft, the fibrous portion being reduced to a mere shell. The soft cellular structure now described explains the brittleness of the hair, its tendency to break easily and to split in a longitudinal direction, many of the diseased hairs being fissured to a considerable extent. As in other syphilitic affections of the cutaneous surface, the accumulation of pigment was remarkable, while the whole of the pathological change may be referred to exhaustion of power and function consequent upon the syphilitic cachexia.—*Med. Times and Gazette*, July 26, 1867.

17. *Hypodermic Injections of Sulphate of Quinia in the Treatment of the Fevers of Algeria.*—In an elaborate investigation, M. JULES ARNOULD discusses the hypodermic employment of sulphate of quinia in Algerian fevers of a malarious and periodic type. He strongly advises this method of using quinia, and refers to a large and successful experience in support of his recommendation. At the same time, this plan should not supersede the administration by the stomach, whenever this can be done without inconvenience to the patient. In

the majority of cases, however, the functions of the stomach are early impaired, and it either rejects the medicine by vomiting, or absorbs it imperfectly and slowly. Often, also, it is necessary to give emetics, and thus the administration of quinia is interfered with. M. Arnould mentions, among the chief additional advantages of hypodermic injection, the relatively smaller dose required, which seems to be about two-thirds, and this is of importance where large quantities of an expensive drug are used; the greater rapidity of effect; the certainty of absorption; the avoidance of many unpleasant draughts; and the slighter quinism (tinnitus aurium, deafness, and cephalalgia) which is caused. The main disadvantage is the action on the subcutaneous cellular tissue, which may, however, be reduced to an insignificant minimum by careful preparation of the solution. The nearer this approaches to a neutral fluid, free of suspended particles, and without coagulating action on albumen, the less will be the irritation. Neutral sulphate of quinia dissolved in twelve parts of water, by the addition of a few drops of sulphuric acid, is the solution which seems to possess the fewest disadvantages.—*Ed. Med. Journ.*, June, 1867, from *Bull. Gén. de Thérap.*

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18. *Strychnia in Epilepsy.*—Mr. WALTER TYRRELL expresses (*Med. Times and Gaz.*, May 18, and August 24, 1867) his belief that in "strychnia we possess a drug which will always control the excitability of the medulla oblongata, and restrain the attacks of convulsion." Large doses of the medicine, he says, must be given to produce the favourable results. "In some of the cases the doses may appear formidable, but I feel confident that with care and watchfulness no ill effects need follow their administration to the epileptic. In such cases the system appears to lose its susceptibility; and the drug even in large doses produces none of the ordinary signs of disagreement. In no case have I seen it produce any mischievous excitement or irritation; and I may state that in one very severe case, still under treatment, I have carried the dose as high as one-fifth of a grain, taken twice daily, and this continued for nearly three weeks together, not only without its producing the slightest sign of irritation, but on the contrary the most marked diminution in the frequency and violence of the attacks. The following case, although the attacks had but recently come on, is interesting as showing how rapidly the beneficial effect of strychnia is often gained, no attacks having supervened after two doses (each of one-twelfth of a grain) had been taken.

H. R., aged 29, has been of late years much exposed to heat in China, Singapore, and Japan; had congestion of the liver in March, 1865; was invalided home in June, 1865; since which time he has been living at home, under treatment for enlargement of the liver, using iodide of potassium and iodine ointment locally. On May 22 of this year—a very cold snowy day—he imprudently stayed out all day fishing, and at dinner that evening was seized with a violent epileptic fit, accompanied with great convulsion; this was followed by other attacks at the following intervals: May 25, three fits, at intervals of one hour and a half; May 30, a fit in the evening; June 1, two fits, with six hours' interval; June 2, one fit in the evening. On June 5 he arrived in Malvern, and I prescribed for him one-twelfth of a grain of strychnia twice daily, allowing him to continue his potash in rather increased quantity. On the morning of the 6th he had three fits, during the first of which I was present; they were very convulsive, and produced an extremely prostrating effect on his mind—so much so, that, even after the ordinary stupor had passed off, he was unable to answer the simplest question without consideration and great hesitation. It is needless to give a daily report of this case. I increased the dose of the strychnia to one-eighth of a grain; he had no further attacks; and his return to health, both bodily and mental, although gradual, was most perfect. He is now at the seaside, and may be considered to all intents and purposes convalescent. In this case it was curious to observe how the inclination to an attack (which occurred several times during the early treatment of the case) yielded at once to a slight increase in the strength of the dose. I may say that in this case I found the use of ice to the nape very useful, insuring quiet sleep, and also allaying a frequent tendency to irritability."

19. *Seton to Neck in Diabetes.*—Dr. Buttura relates (*Gaz. Méd. de Paris*, No. 27, 1865) a case of saccharine diabetes of ten years' duration, in which, after employing various remedies unsuccessfully, he applied a seton to the neck. As suppuration became established the sugar disappeared from the urine. the patient regained strength, and ultimately made a perfect recovery, remaining in good health eight months after the removal of the seton.—*Biennial Retrospect*, 1867.

20. *Thermometric Observations in Pneumonia.*—The collective results of all the observations so far published on the thermometry of pneumonia appears in the following sketch, by Kocher ('Behandl. d. croup. Pneum. mit Veratrumpräparaten,' Würzburg, 1866), of the normal cause of the fever in this disease. The commencement of pneumonia is announced with a rare constancy by *shivering*, with a simultaneous increase of *temperature;* the shivering is the surest starting-point for the calculation of the date of the disease. The initial temperature is so high that it is not commonly exceeded in the whole further course (40°—39° Cent.). As the greatest febrile exacerbation occurs daily at noon, it appears that two thermometric examinations per day are not sufficient. When the fever has once reached a given height it commonly maintains itself at that level, with moderate remissions and exacerbations, till the commencement of defervescence. In the height of the disorder the temperature varies, on the average, between 39° and 40° Cent., and there is ordinarily one remission and one exacerbation in each 24 hours. The stage of high fever is commonly broken by one remission which is more marked than the usual morning remissions which precede and follow it; in some cases there may be, not one, but several such principal remissions. After the principal remission the temperature may follow three courses—either it reaches its old level at the next exacerbation, or may fall short of it, or may pass beyond it. The case is very rare in which the fever altogether vanishes for a time, and then once more undergoes recrudescence. The final defervescence is announced by a critical fall of the temperature, which usually occurs from 12 to 48 hours previously; in cases with *rapid crisis*, where the temperature becomes normal in as little as 24 hours, the fall is continuous; otherwise the daily alterations come in as a disturbing influence.—*Bienn. Retrosp.*, 1867.

21. *The Temperature in Cholera.*—Dr. L. Guterbock, of Berlin, as the result of his observations during the recent outbreak of cholera, gives the following conclusions: 1. In the cold stage the temperature is lowered in the head and extremities to a degree scarcely equalled in any other disease. 2. In the cold stage the temperature of the cavities of the trunk (vagina, rectum), the highest in the body, are alone worthy of trial in determining the general temperature. 3. In the cold stage in most cases (whether it be followed by death or recovery) the internal temperature of the body is elevated, rarely normal, still more rarely diminished, without causes as yet discerned during life or in the dead body. 4. In the cold stage the temperature rises usually as death approaches; an increase after death does not appear to occur. But cases occur in which there is no increase of temperature in the agony, the cause of this difference not being explained. 5. With the occurrence of simple reaction there is no elevation of temperature; rather usually a slight diminution of the internal parts, while the external parts get warmer. 6. In the cases of protracted reaction (protracted asphyxia) the whole temperature sinks usually below the normal. 7. The inflammatory sequelæ induce usually a marked increase of the temperature. 8. During complete re-convalescence the temperature is sometimes high without apparent cause.—*Virchow's Archiv*, Jan. 1867.

22. *Pleurisy in Children.*—Drs. Steiner and Neureutter make some remarks (Prag. *Vierteljahrsch.*) on this subject, based upon 27 observed cases. Pleurisy, in such degree that it can be diagnosed clinically, is rare in children, yet the pleura frequently partakes in various diseases of the lungs and of more remote organs; hence the apparent contradiction between clinical observers and morbid anatomists as to the frequency of the disease. Pleurisy with liquid effusion is

the rarer; generally it is primary, and runs an acute course; the younger the child the less will be the amount of exudation. Pleurisy with proliferation of connective tissue is more common, and generally secondary and of protracted course; not infrequently, however, at any period of childhood, there occurs a mixed form, or sometimes even the two above-named varieties at once, one being developed in each pleural sac; finally, the older the child the more the *ensemble* of symptoms wears the appearance of pleurisy. Widening of the intercostal spaces on the affected side is only serviceable to diagnosis in the older children. More authentic is percussion, the weakened voice-thrill, and the increased resistance of the thorax is a most valuable sign, although not so constant as in adults; the dulness produced by pleurisy is more intense than that of pneumonia, except when both processes are present at once; finally, the weakness or entire absence of respiratory murmur, the weakened voice-sound, and the distant-sounding bronchial breathing, allow us to recognize a pleuritic effusion. On the other hand, pleuritic friction sounds and the displacement of neighbouring organs are rarely available for diagnosis. Of the functional symptoms, quick pulse, high temperature, dyspnœa, and cough, are variously prominent, according to the age of the child, the cause and form of the disease, and the nature of the complications. The site of the pain is, in children up to six or eight years old, almost constantly in the scrobiculus cordis; very young children only show pain in their countenance on being moved. Other nervous symptoms are only occasional in simple pleurisy, more frequent when there are pneumonic complications. Termination by complete reabsorption of the fluid effusion is quite the rule; the process is often completed in simple pleurisy, even with considerable effusion, in a few days; in other cases the remaining products, in the form of layers of lymph, adhesions, &c., by their contraction produce curvature of the spine; or otherwise, if there be frequent relapses and a gradual increase, may under circumstances prove the most powerful cause of pulmonary tubercle. Such children seldom recover perfectly; they have frequent attacks of bronchial catarrh; their complexion is pale, with a tendency to yellowness, they have palpitation of the heart, and great fatigue after slight exertion. The termination of pleurisy in empyema is in children generally less dangerous than in adults. Prognosis is more favourable in primary than in secondary pleurisy, and in the latter the degree of danger is to be measured by the severity of the primary pleurisy; but the prognosis is fatal in secondary pleurisy in the course of pyæmia.

The treatment of pleurisy in children is not different in principle from that of the same disease in adults.—*Bienn. Retrosp.*, 1867.

SURGICAL PATHOLOGY AND THERAPEUTICS, AND OPERATIVE SURGERY.

23. *Treatment of Incised Wounds with a View to Union by the First Intention.*—The doctrine was taught by John Hunter and his pupils that the blood effused from an incised wound often constituted the bond of union. But Prof. Syme, in 1825 (*Ed. Med. Journal*), asserted that the retention of blood between cut surfaces was the great obstacle to their adhesion. The means advised by the Professor to procure union by the first intention were "to delay the closure of the wound until the oozing from it appeared to have ceased; to apply pressure along the course of its sides, and to place some bibulous material over the lips." In a recent article (*Lancet*, July 6, 1867), Prof. Syme states: "The observations of M. Pasteur with regard to the effect of atmospheric atoms in causing decomposition, which have led to Professor Lister's treatment of wounds and abscesses, now established in Glasgow and Edinburgh, and certainly the most important improvement in surgical practice of recent times, has led to a complete revolution of ideas on the subject.

"In cases of bruise, fracture, dislocation, and even operations of tenotomy,